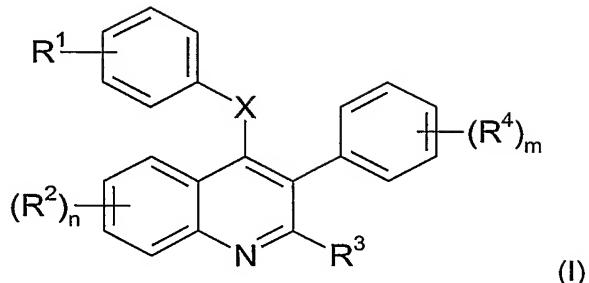


What is claimed is:

1. A compound of Formula I:



including salts, solvates, and pharmaceutically acceptable derivatives thereof wherein

R^1 is $-CH=CH-R^5$;

R^5 is $-CN$, $-C(O)OH$, $-C(O)-N(R^6)(R^7)$;

R^6 and R^7 each independently are hydrogen, alkyl, aryl; or

R^6 and R^7 may combine with the nitrogen atom to which they are attached to form a 3 to 7 membered ring, where said ring may be optionally substituted;

each R^2 independently is hydrogen, halogen, haloalkyl, hydroxy, alkoxy, aryloxy, aralkyloxy, alkoxy carbonyloxy, aryloxy carbonyloxy, aralkyloxy carbonyloxy, alkylsulfonyloxy, arylsulfonyloxy, aralkylsulfonyloxy, or acyloxy;

n is 1 or 2;

R^3 is hydrogen, hydroxy, alkyl, alkoxy, aryloxy, aralkyloxy, haloalkylsulfonyloxy, halogen, haloalkyl, aryl, heteroaryl, aralkyl, or heteroaralkyl;

X is $-O-$, $-S-$, $-S(O)-$, or $-S(O)_2-$;

each R^4 independently is hydrogen, halogen, haloalkyl, hydroxy, alkoxy, aryloxy, aralkyloxy, alkoxy carbonyloxy, aryloxy carbonyloxy, aralkyloxy carbonyloxy, alkylsulfonyloxy, arylsulfonyloxy, aralkylsulfonyloxy, or acyloxy; and

m is 1 or 2.

2. The compound of claim 1 wherein R^5 is $-C(O)OH$ and further comprising wherein the pharmaceutically acceptable derivative is an ester wherein R^5 is $-C(O)OR^8$ and R^8 is alkyl or aralkyl.

3. The compound of claim 1 wherein R^5 is $-C(O)OH$, $-C(O)NH_2$, $-C(O)NH(alkyl)$, $-C(O)N(alkyl)_2$, $-C(O)$ -piperidinyl, or $-CN$.

4. The compound of claim 1 wherein X is O or S.

5. The compound of claim 4 wherein X is O.

6. The compound of claim 1 wherein n is 1 and R^2 is hydroxyl, alkoxy, or aralkyloxy.

7. The compound of claim 6 wherein R² is hydroxy substituted on the 7 position of the depicted quinoline ring.
8. The compound of claim 1 wherein R³ is alkyl, hydroxyl, aralkyloxy, haloalkylsulfonyloxy, or aryl.
9. The compound of claim 8 wherein R³ is C₁-C₆ alkyl or phenyl.
10. The compound of claim 9 wherein R³ is ethyl.
11. The compound of claim 1 wherein m is 1 and R⁴ is hydrogen.
12. The compound of claim 1 wherein m is 1 and R⁴ is haloalkyl.
13. The compound of claim 12 wherein R⁴ is -CF₃ and is substituted in the 3 position on the depicted phenyl ring.
14. A compound of claim 1 selected from the group consisting of:
4-[(7-Hydroxy-2-ethyl-3-phenyl-4-quinolinyl)oxyphenyl]-2-propenoic acid;
4-[(7-Hydroxy-2-ethyl-3-phenyl-4-quinolinyl)oxyphenyl]-2-propenoamide;
4-[(7-Hydroxy-2-ethyl-3-phenyl-4-quinolinyl)oxyphenyl]-2-propeno-N-isopropylamide;
4-[(7-Hydroxy-2-ethyl-3-phenyl-4-quinolinyl)oxyphenyl]-2-propeno-N,N-dimethylamide;
4-[(7-Hydroxy-2-ethyl-3-phenyl-4-quinolinyl)oxyphenyl]-2-propeno-N-piperidinylamide;
4-[(7-Hydroxy-2-ethyl-3-phenyl-4-quinolinyl)oxyphenyl]-2-propenonitrile;
4-[(7-Hydroxy-2-ethyl-3-(3-trifluoromethylphenyl)-4-quinolinyl)oxyphenyl]-2-propeno-N-isopropylamide;
4-[(7-Hydroxy-2-ethyl-3-(3-trifluoromethylphenyl)-4-quinolinyl)oxyphenyl]-2-propenoic acid;
4-[(7-Hydroxy-2-phenyl-3-phenyl-4-quinolinyl)oxyphenyl]-2-propenoic acid;
3-[(7-Hydroxy-2-ethyl-3-phenyl-4-quinolinyl)oxyphenyl]-2-propenoic acid; and
4-[(7-Hydroxy-2-ethyl-3-phenyl-4-quinolinyl)thiophenyl]-2-propenoamide.
15. A compound according to claim 1 substantially as herein above described with reference to any one of the Examples.
16. A pharmaceutical composition comprising a compound according to any one of claims 1-14.
17. The pharmaceutical composition of claim 16 further comprising a pharmaceutically acceptable excipient, carrier, diluent, or mixtures thereof.
18. A compound according to any one of claims 1-14 for use in the prophylaxis or treatment of diseases, disorders, conditions, or side effects that respond to selective estrogen receptor modulation.
19. A compound according to any one of claims 1-14 for use in the prophylaxis or treatment of osteoporosis, bone demineralization, reduced bone mass, density, or growth, osteoarthritis, acceleration of bone fracture repair and healing, acceleration of healing in joint replacement, periodontal disease, acceleration of tooth repair or growth, Paget's

disease, osteochondrodysplasias, muscle wasting, the maintenance and enhancement of muscle strength and function, frailty or age-related functional decline ("ARFD"), sarcopenia, chronic fatigue syndrome, chronic myalgia, acute fatigue syndrome, acceleration of wound healing, maintenance of sensory function, chronic liver disease, AIDS, weightlessness, burn and trauma recovery, thrombocytopenia, short bowel syndrome, irritable bowel syndrome, inflammatory bowel disease, Crohn's disease and ulcerative colitis, obesity, eating disorders including anorexia associated with cachexia or aging, hypercortisolism and Cushing's syndrome, cardiovascular disease or cardiac dysfunction, congestive heart failure, high blood pressure, breast cancer, malignant tumor cells including breast, brain, skin, ovary, bladder, lymphatic, liver, kidney, uterine, pancreas, endometrium, lung, colon, and prostate, prostatic hyperplasia, hirsutism, acne, seborrhea, androgenic alopecia, anemia, hyperpilosity, adenomas and neoplasia of the prostate, hyperinsulinemia, insulin resistance, diabetes, syndrome X, dyslipidemia, urinary incontinence, atherosclerosis, libido enhancement, sexual dysfunction, depression, depressive symptoms, nervousness, irritability, stress, reduced mental energy and low self-esteem, improvement of cognitive function, endometriosis, polycystic ovary syndrome, counteracting preeclampsia, premenstrual syndrome, contraception, uterine fibroid disease, and/or aortic smooth muscle cell proliferation, vaginal dryness, pruritis, dyspareunia, dysuria, frequent urination, urinary tract infections, hypercholesterolemia, hyperlipidemia, peripheral vascular disease, restenosis, vasospasm, vascular wall damage due to immune responses, Alzheimer's disease, bone disease, aging, inflammation, rheumatoid arthritis, respiratory disease, emphysema, reperfusion injury, viral hepatitis, tuberculosis, psoriasis, amyotrophic lateral sclerosis, stroke, CNS trauma, dementia, neurodegeneration, breast pain and dysmenorrhea, menopausal or postmenopausal disorders, vasomotor symptoms, urogenital or vulvar vaginal atrophy, atrophic vaginitis, female sexual dysfunction, for enhancing libido, for the treatment of hypoactive sexual disorder, sexual arousal disorder, for increasing the frequency and intensity of orgasms, vaginismus, osteopenia, endometriosis, BPH (benign prostatic hypertrophy), autoimmune diseases, Hashimoto's thyroiditis, SLE (systemic lupus erythematosus), myasthenia gravis, or reperfusion damage of ischemic myocardium.

20. The compound of claim 19 wherein the use relates to menopausal or postmenopausal disorders, vasomotor symptoms, urogenital or vulvar vaginal atrophy, atrophic vaginitis, female sexual dysfunction, breast cancer, depressive symptoms, diabetes, bone demineralization, and/or osteoporosis, osteoporosis, cardiovascular disease, breast cancer, uterine cancer, prostate cancer, dyslipidemia, menopausal vasomotor

conditions, central nervous system conditions and disorders, prostate hyperplasia, urinary incontinence, atherosclerosis, uterine fibroid disease, aortic smooth muscle cell proliferation, or endometriosis.

21. Use of a compound according to any one of claims 1-14 in the manufacture of a medicament for use in the prophylaxis or treatment of diseases, disorders, conditions, or side effects that respond to selective estrogen receptor modulation.
22. Use of a compound according to any one of claims 1-14 in the manufacture of a medicament for use in the prophylaxis or treatment of osteoporosis, bone demineralization, reduced bone mass, density, or growth, osteoarthritis, acceleration of bone fracture repair and healing, acceleration of healing in joint replacement, periodontal disease, acceleration of tooth repair or growth, Paget's disease, osteochondrodysplasias, muscle wasting, the maintenance and enhancement of muscle strength and function, frailty or age-related functional decline ("ARFD"), sarcopenia, chronic fatigue syndrome, chronic myalgia, acute fatigue syndrome, acceleration of wound healing, maintenance of sensory function, chronic liver disease, AIDS, weightlessness, burn and trauma recovery, thrombocytopenia, short bowel syndrome, irritable bowel syndrome, inflammatory bowel disease, Crohn's disease and ulcerative colitis, obesity, eating disorders including anorexia associated with cachexia or aging, hypercortisolism and Cushing's syndrome, cardiovascular disease or cardiac dysfunction, congestive heart failure, high blood pressure, breast cancer, malignant tumor cells including breast, brain, skin, ovary, bladder, lymphatic, liver, kidney, uterine, pancreas, endometrium, lung, colon, and prostate, prostatic hyperplasia, hirsutism, acne, seborrhea, androgenic alopecia, anemia, hyperpilosity, adenomas and neoplasia of the prostate, hyperinsulinemia, insulin resistance, diabetes, syndrome X, dyslipidemia, urinary incontinence, atherosclerosis, libido enhancement, sexual dysfunction, depression, depressive symptoms, nervousness, irritability, stress, reduced mental energy and low self-esteem, improvement of cognitive function, endometriosis, polycystic ovary syndrome, counteracting preeclampsia, premenstrual syndrome, contraception, uterine fibroid disease, and/or aortic smooth muscle cell proliferation, vaginal dryness, pruritis, dyspareunia, dysuria, frequent urination, urinary tract infections, hypercholesterolemia, hyperlipidemia, peripheral vascular disease, restenosis, vasospasm, vascular wall damage due to immune responses, Alzheimer's disease, bone disease, aging, inflammation, rheumatoid arthritis, respiratory disease, emphysema, reperfusion injury, viral hepatitis, tuberculosis, psoriasis, amyotrophic lateral sclerosis, stroke, CNS trauma, dementia, neurodegeneration, breast pain and dysmenorrhea, menopausal or postmenopausal disorders, vasomotor symptoms,

urogenital or vulvar vaginal atrophy, atrophic vaginitis, female sexual dysfunction, for enhancing libido, for the treatment of hypoactive sexual disorder, sexual arousal disorder, for increasing the frequency and intensity of orgasms, vaginismus, osteopenia, endometriosis, BPH (benign prostatic hypertrophy), autoimmune diseases, Hashimoto's thyroiditis, SLE (systemic lupus erythematosus), myasthenia gravis, or reperfusion damage of ischemic myocardium.

23. The use according to claim 22 wherein the disease, disorder, condition, or side effect is menopausal or postmenopausal disorders, vasomotor symptoms, urogenital or vulvar vaginal atrophy, atrophic vaginitis, female sexual dysfunction, breast cancer, depressive symptoms, diabetes, bone demineralization, and/or osteoporosis, osteoporosis, cardiovascular disease, breast cancer, uterine cancer, prostate cancer, dyslipidemia, menopausal vasomotor conditions, central nervous system conditions and disorders, prostate hyperplasia, urinary incontinence, atherosclerosis, uterine fibroid disease, aortic smooth muscle cell proliferation, or endometriosis.
24. A method of eliciting a biological or medical response of a tissue, system, animal, or human that responds to selective estrogen receptor modulation in mammals comprising administering to said tissue, system, animal, or human in need of such treatment an effective amount of a compound according to any one of claims 1-14.
25. A method of treating, healing, preventing, ameliorating, or decreasing advancement of a disease, disorder, condition, or side effect that responds to selective estrogen receptor modulation in mammals comprising administering to a mammal in need of such treatment a therapeutically effective amount of a compound according to any one of claims 1-14.
26. A method for treating, healing, preventing, ameliorating, or decreasing advancement of prophylaxis or treatment of osteoporosis, bone demineralization, reduced bone mass, density, or growth, osteoarthritis, acceleration of bone fracture repair and healing, acceleration of healing in joint replacement, periodontal disease, acceleration of tooth repair or growth, Paget's disease, osteochondrodysplasias, muscle wasting, the maintenance and enhancement of muscle strength and function, frailty or age-related functional decline ("ARFD"), sarcopenia, chronic fatigue syndrome, chronic myalgia, acute fatigue syndrome, acceleration of wound healing, maintenance of sensory function, chronic liver disease, AIDS, weightlessness, burn and trauma recovery, thrombocytopenia, short bowel syndrome, irritable bowel syndrome, inflammatory bowel disease, Crohn's disease and ulcerative colitis, obesity, eating disorders including anorexia associated with cachexia or aging, hypercortisolism and Cushing's syndrome, cardiovascular disease or cardiac dysfunction, congestive heart failure, high blood

pressure, breast cancer, malignant tumor cells including breast, brain, skin, ovary, bladder, lymphatic, liver, kidney, uterine, pancreas, endometrium, lung, colon, and prostate, prostatic hyperplasia, hirsutism, acne, seborrhea, androgenic alopecia, anemia, hyperpilosity, adenomas and neoplasia of the prostate, hyperinsulinemia, insulin resistance, diabetes, syndrome X, dyslipidemia, urinary incontinence, atherosclerosis, libido enhancement, sexual dysfunction, depression, depressive symptoms, nervousness, irritability, stress, reduced mental energy and low self-esteem, improvement of cognitive function, endometriosis, polycystic ovary syndrome, counteracting preeclampsia, premenstrual syndrome, contraception, uterine fibroid disease, and/or aortic smooth muscle cell proliferation, vaginal dryness, pruritis, dyspareunia, dysuria, frequent urination, urinary tract infections, hypercholesterolemia, hyperlipidemia, peripheral vascular disease, restenosis, vasospasm, vascular wall damage due to immune responses, Alzheimer's disease, bone disease, aging, inflammation, rheumatoid arthritis, respiratory disease, emphysema, reperfusion injury, viral hepatitis, tuberculosis, psoriasis, amyotrophic lateral sclerosis, stroke, CNS trauma, dementia, neurodegeneration, breast pain and dysmenorrhea, menopausal or postmenopausal disorders, vasomotor symptoms, urogenital or vulvar vaginal atrophy, atrophic vaginitis, female sexual dysfunction, for enhancing libido, for the treatment of hypoactive sexual disorder, sexual arousal disorder, for increasing the frequency and intensity of orgasms, vaginismus, osteopenia, endometriosis, BPH (benign prostatic hypertrophy), autoimmune diseases, Hashimoto's thyroiditis, SLE (systemic lupus erythematosus), myasthenia gravis, or reperfusion damage of ischemic myocardium in a mammal comprising administering to a mammal in need of such treatment a therapeutically effective amount of a compound according to any one of claims 1-14.

27. The method of claim 26 wherein the disease, disorder, condition, or side effect is menopausal or postmenopausal disorders, vasomotor symptoms, urogenital or vulvar vaginal atrophy, atrophic vaginitis, female sexual dysfunction, breast cancer, depressive symptoms, diabetes, bone demineralization, and/or osteoporosis, osteoporosis, cardiovascular disease, breast cancer, uterine cancer, prostate cancer, dyslipidemia, menopausal vasomotor conditions, central nervous system conditions and disorders, prostate hyperplasia, urinary incontinence, atherosclerosis, uterine fibroid disease, aortic smooth muscle cell proliferation, or endometriosis.